

CLAIMS

1. An acoustic vibration analyzing apparatus capable of carrying out analysis of acoustic vibrations by picking up data of sounds or vibrations generated due to rotation of a plurality of rotating bodies and data of a number of revolutions of a rotating body selected from the plurality of rotating bodies when a power transmission mechanism of a vehicle having the plurality of rotating bodies operates, said acoustic vibration analyzing apparatus comprising:

frequency analyzing means of calculating data of frequencies of the plurality of rotating bodies by analyzing frequencies of the data of the sounds or vibrations;

order converting means of calculating orders in response to specifications of the plurality of rotating bodies based on data of frequencies of the plurality of rotating bodies;

speed converting means of calculating speed of the vehicle based on data of the number of revolutions of the plurality of rotating bodies; and

means of displaying acoustic pressure levels acquired based on the data of the sounds or vibrations in a manner corresponding to the orders and the vehicle speed.

2. The acoustic vibration analyzing apparatus according to claim 1, further comprising means of reproducing sounds having a specified order selected based on display of the displaying means.

3. The acoustic vibration analyzing apparatus according to claim 2, wherein the reproducing means selectively reproduces any one of original sounds consisting of the sounds or vibrations, sounds having the specified order, and sounds remaining after excluding sound components having the specified order from the original sounds.

4. The acoustic vibration analyzing apparatus according to claim 2, further comprising means of converting data of the sounds reproduced by the reproducing means into a file in a predetermined data format.

5. A method of analyzing acoustic vibrations by picking up data of sounds or vibrations that are generated due to rotation of a plurality of rotating bodies and data of the number of revolutions of a rotating body selected from the plurality of rotating bodies when a power transmission mechanism of a vehicle having the plurality of rotating bodies operates, said method comprising:

a frequency-analyzing step of calculating frequencies of the plurality of rotating bodies by analyzing frequencies of the data of the sounds or vibrations;

an order converting step of calculating an order responsive to specifications of the plurality of rotating bodies based on data of frequencies of the plurality of rotating bodies;

a speed-converting step of calculating speeds of the vehicle based on data of numbers of revolutions of the rotating bodies; and

a displaying step of displaying acoustic pressure levels acquired based on the data of the sounds or vibrations in a manner corresponding to the order and vehicle speeds.

6. The method of analyzing acoustic vibrations according to Claim 5, further comprising: a step of reproducing sounds when reproduction of sounds having a specified order are selected, based on display made in the displaying step.

7. The method of analyzing acoustic vibrations according to Claim 6, wherein the reproducing step involves selectively reproducing any one of original sounds consisting of the sounds or vibrations, sounds having the specified order, and sounds remaining after excluding sound components having the specified order from the original sounds.

8. An acoustic vibration analyzing program by which acoustic vibration analysis is carried out by causing data of sounds or vibrations generated due to rotation of a plurality of rotating bodies and data of a number of revolutions of a rotating body selected from the plurality of rotating bodies picked up by a computer when a power transmission mechanism of a vehicle having the plurality of rotating bodies operates, said program comprising:

a frequency-analyzing step of calculating frequencies of the plurality of rotating bodies by analyzing frequencies of the data of the sounds or vibrations;

an order converting step of calculating an order responsive to specifications of the plurality of rotating bodies based on data of the frequencies of the plurality of rotating bodies;

a speed-converting step of calculating speeds of the vehicle based on data of the numbers of revolutions of the rotating bodies; and

a displaying step of displaying acoustic pressure levels acquired based on the data of the sounds or vibrations in a manner corresponding to the order and the vehicle speed.

9. A recording medium readable by a computer, by which acoustic vibration analysis is carried out by causing data of sounds or vibrations generated due to rotation of a plurality of rotating bodies and data of a number of revolutions of a rotating body selected from the plurality of rotating bodies picked up by a computer when a power transmission mechanism of a vehicle having the plurality of rotating bodies operates, wherein said recording medium stores a program comprising:

a frequency-analyzing step of calculating frequencies of the plurality of rotating bodies by analyzing frequencies of the data of the sounds or vibrations;

an order converting step of calculating an order responsive to specifications of the plurality of rotating bodies based on data of the frequencies of the plurality of rotating bodies;

a speed-converting step of calculating speeds of the vehicle based on data of the numbers of revolutions of the rotating bodies; and

a displaying step of displaying acoustic pressure levels acquired based on the data of the sounds or vibrations in a manner corresponding to the order and the vehicle speed.